

## The Corncrake (*Crex crex*) in Slovenia

Vesna Grobelnik & Peter Trontelj

### 1. Introduction

Until the 1990s all the data available on corncrakes were collected by random observations. ERJAVEC (1868) described the corncrake as a bird easy to be heard from meadows and a favourite game bird for its tasty meat. Hunters used to believe that corncrakes are the leaders of quails. Some other observations are from the beginning of the 20th century (REISER 1925; BAËAR 1939).

### 2. Development of knowledge about the corncrake in Slovenia

In the early 90s, after the alarming reports on population decline in Western Europe, DOPPS - BirdLife Slovenia started a project to increase knowledge about corncrakes. A census in 1992/93 was followed by more detailed studies of corncrake ecology at Ljubljansko barje, Jovsi, Lake Cerknica, and the upper Soča Basin.

### 3. Size and distribution of corncrake population

#### 3.1. Size of national corncrake population

In 1992 and 93, the first and so far the only corncrake census was carried out in Slovenia (TRONTELI 1997). Most of the potential sites were investigated.

464 singing males were counted, according to which the Slovenian population can be quite accurately estimated at about 510 males (accuracy 2-3) in the census period. The focal points of its distribution are the karst polje along the Ljubljanska river system and Ljubljansko barje, where 84% of all corncrakes were registered (Table 1). In the lowlands of the eastern and northeastern parts of Slovenia, only isolated records were made

apart from a small remaining population at Jovsi. With the exception of a few individuals, corncrakes were absent in the plains along all larger rivers. Abandoned alpine meadows above 700 m a.s.l. in the western Julian Alps and in the Dinaric mountains hold small populations with the centre at Kobariški Stol. Most of the corncrakes (64%) were recorded in annually inundated late-mown meadows and sedge meadows. Unmown marshes and somewhat drier, extensively cultivated meadows represent the next most important habitats, followed by abandoned alpine meadows. Arable land is insignificant as a corncrake habitat.

#### 3.2. Development of population

Data on the distribution of corncrakes in the last 50 years (GEISTER 1995, and unpublished data) show a considerable decrease in range. Important former calling sites (local farmers reported on quantities "impossible to count") in central and northeast Slovenia have not been occupied for decades. Since the countrywide census in 1992/93, the population trend has been estimated according to sample counts in some areas. At Ljubljansko Barje and Lake Cerknica, declines of up to 50% have been recorded for the last six years. Annual counts at Lake Cerknica ("Crex night", organised by DOPPS - BirdLife Slovenia together with local inhabitants) revealed strong fluctuations in numbers (Fig. 1) (POLAK, pers. comm.). Lake Cerknica is a typical intermittent karst lake with extremely varying water levels which is probably one of the reasons for the fluctuations.

### 4. Threats to the corncrake population

So far Jovsi is the only important corncrake area with adequate legal protection status. All other

sites are threatened by human impact (Table 2). Governmental conservation offices are not interested in supporting corncrake-friendly mowing schemes and land use nor do they support the necessary research projects. On the contrary, new drainage projects and regulations of rivers in corncrake areas are planned.

### 5. Conservation status

Corncrakes have been fully protected from hunting and deliberate destruction of nests, eggs,

chicks and habitat since 1967. The species is listed in the Slovenian Red Data Book of Endangered Breeding Birds.

### 6. Conservation projects

- Jovsi, about 460 ha of wet meadows in eastern Slovenia with a small but steady population of corncrakes has been protected since 1994. Raising awareness among the local farmers is an ongoing project.

**Table 1:** Numbers of calling corncrakes in Slovenia in 1992/93

Region	Site	No.	%
Notranjska	Ljubljansko barje	230	50
	Lake Cerknica	101	22
	Planinsko polje	29	5
	Valley of River Reka	30	6
	Nanošcica	12	3
	Postojna basin	9	2
	other	9	2
Primorska	Kobariški Stol	14	3
	other	9	2
Štajerska	Jovsi	6	1,5
	other	3	0,5
Dolenjska		8	2
Gorenjska		2	0,5
Prekmurje		2	0,5
Together		464	100

**Table 2:** Main threats to important corncrake areas in Slovenia

- + major threat
- (+) minor threat
- ? extent of threat not known

	Drainage	Transformation into arable land	Habitat destruction (roads, buildings etc.)	Early and frequent mowing	Abandonment	Tourism
Ljubljansko barje	+	+	+	+	(+)	+
Lake Cerknica	+				(+)	+
Planinsko polje	+	+		+	(+)	
Reka valley	+	+	?	+		
Jovsi	(+)			(+)	(+)	
Kobariški Stol			(+)		+	(+)

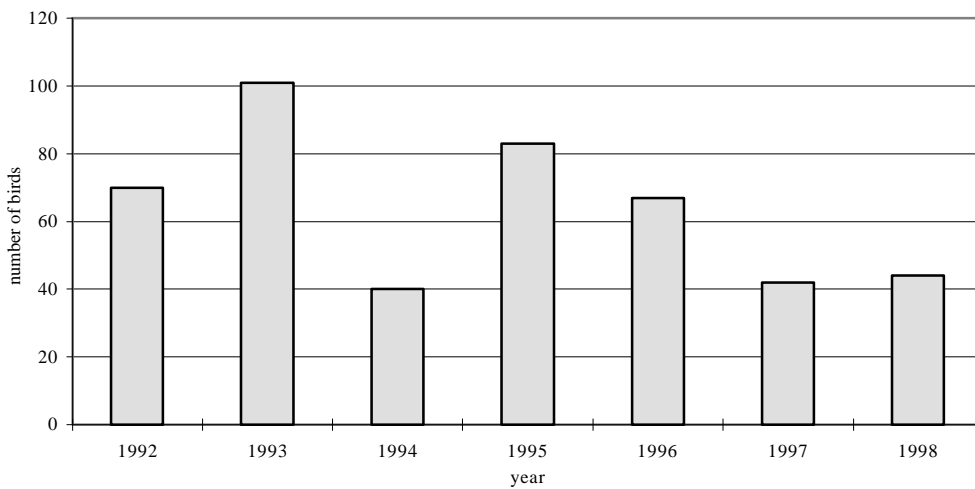
- In 1998, a project for raising public awareness, educating farmers and promoting corncrake friendly mowing has been launched. DOPPS - BirdLife Slovenia published a leaflet about this topic.
- Ljubljansko Barje, the most important corncrake breeding area in Slovenia, has been officially considered for protection by the local government. DOPPS - BirdLife Slovenia is trying to achieve the adoption of an appropriate management plan

for this area that would enable the survival and increase of the corncrake population.

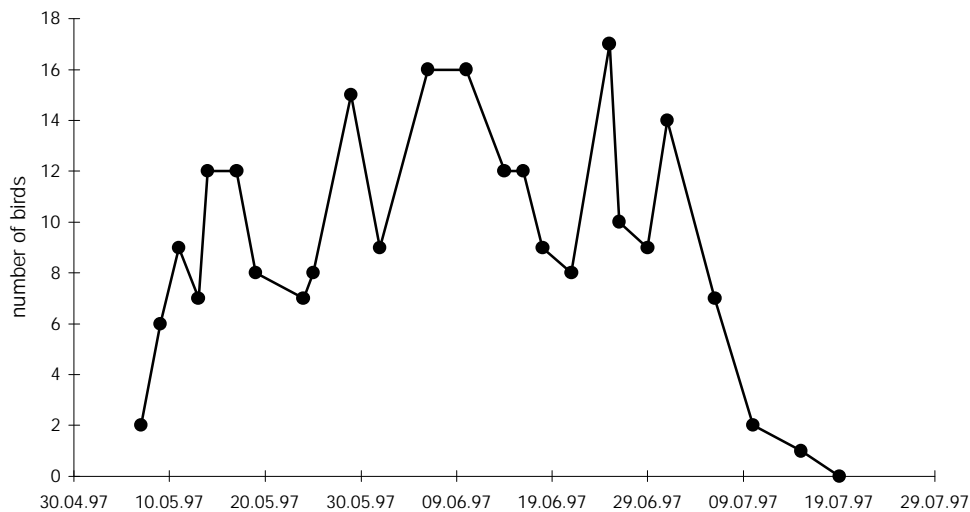
**7. Ongoing or planned conservation or study projects**

Research Projects:

- Study of habitat selection and calling activity at Ljubljansko Barje - ongoing (see below)



**Figure 1:** Results of the annual corncrake monitoring at Lake Cerknica



**Figure 2:** Number of males calling during the night on the study plots at Ljubljansko Barje throughout the season

- National census in 1999 to 2000 - planned  
Conservation Projects:  
- Protection of Ljubljansko Barje - ongoing  
- Protection of Lake Cerknica - ongoing  
- Raising of public awareness and promotion of  
corncrake friendly mowing - ongoing  
Study of habitat selection and calling activity at  
Ljubljansko barje:

Ljubljansko Barje holds the biggest part of the Slovenian corncrake population. Its land structure is extremely patchy. Small, differently managed parcels of land (some no bigger than 0,5 ha) are separated by ditches and form a mosaic of meadows, shrubbery, abandoned areas and arable land. Many of the meadows have already been replaced by cornfields or were abandoned. To prevent further loss of suitable habitat, DOPPS - BirdLife Slovenia is attempting to introduce corncrake friendly management. For this purpose, a better knowledge of the corncrake's breeding habits at this area was needed.

Field studies were conducted in the years 1996-98 at two plots measuring 100 and 50 hectares, respectively. At the arrival of the birds in the study area a strong daytime calling activity was recorded, but the birds were silent during the night. After a few days, these birds began to call at night and gradually reduced their daytime calling. Two major declines in calling activities of corncrakes in mid May and mid June (Fig. 2) are probably due to the formation of pairs. Males are believed to interrupt their nocturnal calling during that period. The decline from the end of June coincides with increased mowing activity.

Habitat preferences were determined by comparing habitat structure data of the calling sites to the structure of the study plots. On both plots over 50% of the recorded males preferred unintensively cultivated meadows (fertilised and

mown once a year). Most of the birds called from meadows with predominant tall herb (*Filipendula*, *Valeriana*). On meadows with small shares of herbs, on abandoned cornfields and overgrown meadows only a small percentage of birds were recorded. At the beginning of the breeding season, corncrakes used the high vegetation of ditches and canals, isolated willow bushes, and last year's herbs for early cover.

The telemetry studies at Ljubljansko Barje were supported by the RSPB. RSPB also provided five new radio transmitters that will enable the continuation of the investigation in 1999.

Vesna Grobelnik  
DOPPS-BirdLife Slovenia  
P.O. box 2395  
SLO-1001 Ljubljana, Slovenia

Peter Trontelj  
Department of Biology, University of Ljubljana  
P.O. box 2995  
SLO-1001 Ljubljana, Slovenia

## References

- BAÈAR, R. (1939): Brehm. Življenje živali. - Umetniška propaganda. Ljubljana.
- ERJAVEC, F. (1870): Domaèe in tuje živali v podobah. II. Ptice. Celovec.
- GEISTER, I. (1995): Ornitološki atlas Slovenije. - DZS, Ljubljana.
- REISER, O. (1925): Die Vögel von Marburg an der Drau. - Naturwissenschaftlicher Verein in Steiermark, Graz.
- TRONTELI, P. (1997): Der Wachtelkönig *Crex crex* in Slowenien: Bestand, Verbreitung, Habitat und Schutz [The Corncrake *Crex crex* in Slovenia: status, distribution, habitat and conservation]. - *Vogelwelt* **118**: 223-229.